Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/919,527	RHODES, N. LEE
	Examiner	**Art Unit**	
	LaShanya R. Nash	2153	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 January 2006</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

This action is in response to an Appeal Brief filed January 9, 2006. Claims 1-47 are

presented for further consideration.

Response to Arguments

Applicant's request for reconsideration of the finality of the rejection of the last

Office action is persuasive and, therefore, the finality of that action is withdrawn.

Applicant's arguments with respect to claims 1-47 have been considered but are

moot in view of the new grounds of rejection is made in view of newly found reference

Dietz et al. (US Patent 6,839,751). Examiner suggests amending the independent

claims to further include limitations which explicitly describe that usage data for the

statistical model is tracked, accumulated, and subsequently updated independently for

each user ID or customer's usage, as disclosed in Applicant's specification (pages 11-

13), so as to clearly distinguish over the prior art on record.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e),the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 13, 37-38, and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Dietz et al (US Patent 6,839,751), hereinafter referred to as Dietz.

In reference to claim 1, Dietz discloses a method for re-using information from data transactions for maintaining statistics in network monitoring. Dietz discloses (abstract; column 4, lines 14-33):

- A method for analyzing a stream of usage data (Figure 3; column 8, lines 45-56), comprising:

  - Generating a statistical model (i.e. statistical measures/network usage metrics; column 3, lines 14-33; column 17, lines 35-53) from a set of record events (i.e. flow-entry; column 10, line 55-column 11, line 5);

  - Receiving a most recent record event, (i.e. new packet of flow arrives at monitor; column 8, lines 45-62; Figure 3-item 302) and

  - Updating the statistical model using the most recent event by adding the most recent record to the statistical model (updating statistical measures stored in the flow-entry; column 11, lines 50-58; column 12, lines 55-67), wherein an identifier is associated with each record event (i.e. unique flow signature; column 11, lines 15-49), including updating only a portion of the statistical model associated with the identifier (i.e. updating statistical measures of the flow-entry that matches the unique flow signature/previously encountered flow; column 17, lines 9-60; Figure 3-item 322).

In reference to claim 13, Dietz discloses a method for re-using information from data
transactions for maintaining statistics in network monitoring. Dietz discloses (abstract;
column 4, lines 14-33):

- A method for analyzing a stream of usage data (Figure 3; column 8, lines 45-56)
  over a rolling time interval, comprising:

    - Defining a statistical model (i.e. statistical measures/network usage metrics;
      column 3, lines 14-33; column 17, lines 35-53) from a set of record events (i.e.
      flow-entry; column 10, line 55-column 11, line 5);

    - Defining the rolling time interval to include a plurality of update time intervals (i.e.
      time interval; column 33, line 15-column 34, line 30);

    - Receiving a record event from the stream of network usage data over the rolling
      time interval, (i.e. new packet of flow arrives at monitor; column 8, lines 45-62;
      Figure 3-item 302);

    - Storing the record event for each update interval in a history cache (i.e. cache
      memory containing flow database; column 17, lines 4-34);

    - Generating a statistical model (i.e. statistical measures/network usage metrics;
      column 3, lines 14-33; column 17, lines 35-53) over the rolling time interval using
      the statistical model and each record event stored in the history cache (i.e. flow-
      entry; column 10, line 55-column 11, line 5);

    - Updating the statistical model using the statistical model and a most recent event
      for a most recent update time interval (updating statistical measures stored in the
      flow-entry; column 11, lines 50-58; column 12, lines 55-67), including updating

only a portion of the statistical model associated (i.e. unique flow signature;

column 11, lines 15-49), with the most recent record event (i.e. updating

statistical measures of the flow-entry that matches the unique flow

signature/previously encountered flow; column 17, lines 9-60; Figure 3-item 322).

In reference to claim 37, Dietz discloses a system for re-using information from data

transactions for maintaining statistics in network monitoring. Dietz discloses (abstract;

column 4, lines 14-33):

- A network usage analysis system for analyzing a stream of network usage data

  (Figure 3; column 8, lines 45-56), comprising:

  - A data analysis system server (i.e. analyzer; column 6, lines 5-20; Figure 1-item

    108) which generates a statistical model (i.e. statistical measures/network usage

    metrics; column 3, lines 14-33; column 17, lines 35-53) from a set of record

    events (i.e. flow-entry; column 10, line 55-column 11, line 5);

  - Receiving a most recent record event, (i.e. new packet of flow arrives at monitor;

    column 8, lines 45-62; Figure 3-item 302) and

  - Updating the statistical model using the most recent event by adding the most

    recent record to the statistical model (updating statistical measures stored in the

    flow-entry; column 11, lines 50-58; column 12, lines 55-67), wherein an identifier

    is associated with each record event (i.e. unique flow signature; column 11, lines

    15-49), including updating only a portion of the statistical model associated with

the identifier (i.e. updating statistical measures of the flow-entry that matches the

unique flow signature/previously encountered flow; column 17, lines 9-60; Figure

3-item 322).

In reference to claim 45, Dietz discloses a system comprising hardware and software for

re-using information from data transactions for maintaining statistics in network

monitoring. Dietz discloses (abstract; column 4, lines 14-33):

- A computer-readable medium having computer executable instructions (i.e.

  software; column 8, line 45-50) for performing a method for analyzing a of usage

  data, the method (Figure 3; column 8, lines 50-56), comprising:

  - Generating a statistical model (i.e. statistical measures/network usage metrics;

    column 3, lines 14-33; column 17, lines 35-53) from a set of record events (i.e.

    flow-entry; column 10, line 55-column 11, line 5);

  - Receiving a most recent record event, (i.e. new packet of flow arrives at monitor;

    column 8, lines 45-62; Figure 3-item 302) and

  - Updating the statistical model using the most recent event by adding the most

    recent record to the statistical model (updating statistical measures stored in the

    flow-entry; column 11, lines 50-58; column 12, lines 55-67), wherein an identifier

    is associated with each record event (i.e. unique flow signature; column 11, lines

    15-49), including updating only a portion of the statistical model associated with

    the identifier (i.e. updating statistical measures of the flow-entry that matches the

    unique flow signature/previously encountered flow; column 17, lines 9-60; Figure

3-item 322).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 23, 25-26 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Dietz et al (US Patent 6,839,751), in view of Kawasaki (US Patent 6,539,375),

hereinafter referred to as Dietz and Kawasaki.

In reference to claim 23, Dietz discloses a method for re-using information from data

transactions for maintaining statistics in network monitoring. Dietz discloses (abstract;

column 4, lines 14-33):

- A method for analyzing a stream of usage data (Figure 3; column 8, lines 45-56)

  over a rolling time interval, comprising:

  - Defining a statistical model (i.e. statistical measures/network usage metrics;

    column 3, lines 14-33; column 17, lines 35-53) from a set of record events over a

    rolling time interval (i.e. flow-entry; column 10, line 55-column 11, line 5);

  - Defining the rolling time interval to include a plurality of update time intervals (i.e.

    time interval; column 33, line 15-column 34, line 30);

  - Receiving a record event from the stream of network usage data over the rolling

time interval, (i.e. new packet of flow arrives at monitor; column 8, lines 45-62;

Figure 3-item 302);

- Storing the record event for each update interval in a history cache (i.e. cache

  memory containing flow database; column 17, lines 4-34);

- Generating a statistical model (i.e. statistical measures/network usage metrics;

  column 3, lines 14-33; column 17, lines 35-53) over the rolling time interval using

  the statistical model and each record event stored in the history cache (i.e. flow-

  entry; column 10, line 55-column 11, line 5);

- Updating the statistical model using the statistical model and a most recent event

  for a most recent update time interval (updating statistical measures stored in the

  flow-entry; column 11, lines 50-58; column 12, lines 55-67), including updating

  only a portion of the statistical model associated (i.e. unique flow signature;

  column 11, lines 15-49), with the most recent record event (i.e. updating

  statistical measures of the flow-entry that matches the unique flow

  signature/previously encountered flow; column 17, lines 9-60; Figure 3-item 322).

Although Dietz teaches substantial features of the invention, the reference fails to

disclose: wherein each record event is associated with a user identifier. Nonetheless,

this would have been an obvious modification to the aforementioned method to one of

ordinary skill in the art at the time of the invention, as further evidenced by Kawasaki.

In an analogous art, Kawasaki discloses associating record events to a use

identification (i.e. user profile), used in a method for tracking network (i.e. Internet)

usage of users, (column 2, lines 47-54; column 4, lines 42-61). This modification to the

aforementioned method would have been obvious, because one of ordinary skill in the

art would have been so motivated to identify network usage of specific users session

tracking in client/server exchanges, (column 26, lines 17-37).

In reference to claim 25, Dietz further discloses wherein generating a statistical model

from the set of record events includes generating an aggregation table (i.e. flow-entry

table) for tracking an aggregation of record events associated with an identifier

(columns 11-12).

In reference to claim 26, Dietz discloses the most recent record is associated with an

identifier (i.e. unique flow signature); and wherein updating the statistical model includes

updating only the aggregation of the record events in the tracking table for that identifier

i.e. updating statistical measures of the flow-entry that matches the unique flow

signature/previously encountered flow; column 17, lines 9-60; Figure 3-item 322).

**Claim 29, 31-36 is rejected under 35 U.S.C. 103(a) as being unpatentable over
Dietz et al (US Patent 6,839,751), in view of Aboulnaga et al. (US Patent 6,460,045),
hereinafter referred to as Dietz and Aboulnaga.**

In reference to claim 29, Dietz discloses a method for re-using information from data

transactions for maintaining statistics in network monitoring. Dietz discloses (abstract;

column 4, lines 14-33):

- A method for analyzing a stream of usage data (Figure 3; column 8, lines 45-56)

over a rolling time interval, comprising:

- Defining a statistical model (i.e. statistical measures/network usage metrics; column 3, lines 14-33; column 17, lines 35-53) from a set of record events (i.e. flow-entry; column 10, line 55-column 11, line 5);

- Defining the rolling time interval to include a plurality of update time intervals (i.e. time interval; column 33, line 15-column 34, line 30);

- Receiving a record event from the stream of network usage data over the rolling time interval, (i.e. new packet of flow arrives at monitor; column 8, lines 45-62; Figure 3-item 302);

- Storing the record event for each update interval in a history cache (i.e. cache memory containing flow database; column 17, lines 4-34);

- Generating a statistical model (i.e. statistical measures/network usage metrics; column 3, lines 14-33; column 17, lines 35-53) over the rolling time interval using the statistical model and each record event stored in the history cache (i.e. flow-entry; column 10, line 55-column 11, line 5);

- Updating the statistical model using the statistical model and a most recent event for a most recent update time interval (updating statistical measures stored in the flow-entry; column 11, lines 50-58; column 12, lines 55-67), including updating only a portion of the statistical model associated (i.e. unique flow signature; column 11, lines 15-49), with the most recent record event (i.e. updating statistical measures of the flow-entry that matches the unique flow signature/previously encountered flow; column 17, lines 9-60; Figure 3-item 322).

Although Dietz teaches substantial features of the invention, the reference fails to

disclose: the method generating a histogram statistical model representative of the

network data, wherein the histogram having a first axis illustrating total usage defined by

a number of bins, each bin having a usage variable range, and a second axis defined by

a frequency corresponding to a number of users having a total usage within the usage

variable range of each bin. Nonetheless, histogram statistical models were well known

in the art at the time of the invention, as further evidenced by Aboulnaga. Therefore, this

limitation would have been an obvious modification to the aforementioned method, as

disclosed by the references, for one of ordinary skill in the art.

In an analogous art, Aboulnaga discloses a method of building histogram

statistical models, (column 5, line 37 to column 6, line 3). Aboulnaga further shows

building a histogram that includes a first axis defined a number of bins (i.e. bins; Figure

6-BUCKETS), each bin having a variable range (i.e. high to low; Figure 3; column 6,

lines 30-55) and a second axis defined by a frequency (Figure 3&6) within the variable

range of each bin, (columns 5-10). This modification would have been obvious to one of

ordinary skill in the art, so as employ the bins and buckets of the flow-entry table (Dietz;

column 17, lines 9-35) to increase the accuracy of the statistical model estimations and

thereby increasing process effectiveness, (Aboulnaga column 1, lines 54-55).

In reference to claim 31, Dietz further discloses wherein defining the statistical model

includes an aggregation table (i.e. flow-entry table) of each record event stored in the

history cache (i.e. flow-entry table), (columns 11-12).

In reference to claim 32, Dietz discloses wherein the history cache is an array of memory segments, wherein the number of memory segments is equal to the number of update time intervals in the rolling time interval, (columns 17-18).

In reference to claim 33, Dietz discloses defining the statistical model to include an aggregation of each record event stored in the history cache (i.e. flow-entry table; columns 17-18).

In reference to claim 34, Dietz discloses defining an index array associated including a set of contiguous index segments, wherein each index segment including a pointer to the memory segment storing in the history cache storing the next consecutive record event, (i.e. lookup engine; columns 17-18).

In reference to claim 35, Dietz discloses defining a first pointer to the index segment associated with the memory segment storing the least recent record event, (i.e. lookup engine; columns 17-18).

In reference to claim 36, Aboulnaga discloses generating a histogram statistical model from the aggregation table (column 5, line 37 to column 6, line 3); and Dietz discloses updating only the portion of the histogram statistical model associated with most recent record event, (column 17, lines 9-60).

Claims 2-6, 8-10, 12 and 38-42 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Dietz as applied to claims 1 and 37 above, and further in view

of Steinbiss et al. (US Patent 6,823,307), hereinafter referred to as Steinbiss.

In reference to claims 2 and 38, although Dietz discloses substantial features of

the aforementioned method, the reference fails to explicitly disclose the method further

comprising the step of: updating the statistical model includes removing a least recent

event from the statistical model. Nonetheless, this would have been an obvious

modification to the aforementioned method, to one of ordinary skill in the art at the time

of the invention, as further evidenced by Steinbiss.

In an analogous art, Steinbiss discloses a method for employing stochastic

models that involves storing recently recognized elements in a cache, (abstract; column

2, lines 25-38; and column 5, lines 15-30). Steinbiss further discloses removing the least

recently stored element, (column 5, line 60 to column 6, line 7). This modification would

have been obvious, because one of ordinary skill in the art would have been so

motivated to implement this feature so as to maximize available memory space, thereby

reducing cost associated with larger capacity cache memories, (Steinbiss column 5, line

66 to column 6, line 3).

In reference to claim 3 and 39, although Dietz discloses substantial features of

the aforementioned method such as storing the set of records in a history cache

(column 17, lines 18-20), the reference fails to explicitly disclose the method further

comprising the step of: if the history cache is full, updating the statistical model includes removing a least recent event from the statistical model. Nonetheless, this would have been an obvious modification to the aforementioned method, to one of ordinary skill in the art at the time of the invention, as further evidenced by Steinbiss.

In an analogous art, Steinbiss discloses a method for employing stochastic models that involves storing recently recognized elements in a cache, (abstract; column 2, lines 25-38; and column 5, lines 15-30). Steinbiss further discloses once the cache is full, removing the least recently stored element, (column 5, line 60 to column 6, line 7). This modification would have been obvious, because one of ordinary skill in the art would have been so motivated to implement this feature so as to maximize available memory space, thereby reducing cost associated with larger capacity cache memories, (Steinbiss column 5, line 66 to column 6, line 3).

In reference to claims 4 and 40, Dietz discloses defining the statistical model to include an aggregation of each record event stored in the history cache (columns 11-12).

In reference to claims 5 and 41, Dietz further discloses wherein generating a statistical model from the set of record events includes generating an aggregation table (i.e. flow-entry table) for tracking an aggregation of record events associated with an identifier (columns 11-12).

In reference to claims 6, 9,42,and 44 Dietz discloses generating a complex statistical model representative of the network data from the aggregation table (column 17, lines 35-59).

In reference to claims 8 and 43, Dietz discloses the most recent record is associated with an identifier (i.e. unique flow signature); and wherein updating the statistical model includes updating only the aggregation of the record events in the tracking table for that identifier i.e. updating statistical measures of the flow-entry that matches the unique flow signature/previously encountered flow; column 17, lines 9-60; Figure 3-item 322).

In reference to claim 10, Dietz discloses updating the statistical model includes updating only a portion of the complex statistical model associated with an identifier (columns 17-18).

In reference to claim 12, Steinbiss discloses upon receiving the most recent record event replacing the least recent record even stored in the history cache with the most recent record event, (column 5, line 60 to column 6, line 7).

Claims 7,11, 14-22, and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz and Steinbiss as applied to claim 3 above, and further in view of Aboulnaga et al. (US Patent 6,460,045), hereinafter referred to as Dietz and

Aboulnaga.

In reference to claims 7 and 11, although Dietz and Steinbiss discloses substantial

features of the claimed invention, the references fail to show generating a histogram

statistical model representative of the network data from the aggregation table.

Nonetheless, histogram statistical models were well known in the art at the time of the

invention, as further evidenced by Aboulnaga. Therefore, this limitation would have

been an obvious modification to the aforementioned method, as disclosed by the

references, for one of ordinary skill in the art.

In an analogous art, Aboulnaga discloses a method of building histogram

statistical models, (column 5, line 37 to column 6, line 3). Aboulnaga further shows

building a histogram that includes a first axis defined a number of bins (i.e. bins; Figure

6-*BUCKETS*), each bin having a variable range (i.e. high to low; Figure 3; column 6,

lines 30-55) and a second axis defined by a frequency (Figure 3&6) within the variable

range of each bin, (columns 5-10). This modification would have been obvious to one of

ordinary skill in the art, so as employ the bins and buckets of the aggregation table (I.e.

flow-entry table; Dietz; column 17, lines 9-35) to increase the accuracy of the statistical

model estimations and thereby increasing process effectiveness, (Aboulnaga column 1,

lines 54-55).

In reference to claim 14, Steinbiss further discloses wherein if the history cache is full,

updating the statistical model further includes removing a least recent record event set

associated with a least recent update time interval from the statistical model, (column 5,

line 60 to column 6, line 7).

In reference to claim 15, Dietz discloses defining the statistical model to include an aggregation of each record event stored in the history cache (i.e. flow-entry table; columns 17-18).

In reference to claim 16, Dietz discloses wherein the history cache is an array of memory segments, wherein the number of memory segments is equal to the number of update time intervals in the rolling time interval, (columns 17-18).

In reference to claim 17, Dietz discloses storing each record event in a memory segment in the history cache, (columns 17-18).

In reference to claim 18, Dietz discloses defining an index array associated including a set of contiguous index segments, wherein each index segment including a pointer to the memory segment storing in the history cache storing the next consecutive record event, (i.e. lookup engine; columns 17-18).

In reference to claim 19, Dietz discloses defining a first pointer to the index segment associated with the memory segment storing the least recent record event, (i.e. lookup engine; columns 17-18).

In reference to claim 20, Steinbiss discloses wherein upon receiving a most recent record event the method further comprising replacing the least recent record event stored in the history cache with the most recent record event, (column 5, line 60 to column 6, line 7).

In reference to claim 21, Dietz discloses, moving the first pointer to the next contiguous index segment, (i.e. lookup engine; columns 17-18).

In reference to claim 22, Dietz discloses further defining a second pointer to the index segment associated with the memory segment storing the most recent record event, (i.e. lookup engine; columns 17-18).

In reference to claim 46, Dietz, Steinbiss, and Aboulnaga explicitly show the limitations, as previously addressed for claims 1, 3,4,5,8,11,18,19,20,21, and 29, due to claim 46 reciting the combination of all of the limitations of the aforementioned claims.

In reference to claim 47, Aboulnaga shows wherein the histogram that includes a first axis defined a number of bins (i.e. bins; Figure 6-*BUCKETS*), each bin having a variable range (i.e. high to low; Figure 3; column 6, lines 30-55) and a second axis defined by a frequency (Figure 3&6) within the variable range of each bin, (columns 5-10).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz and

Kawasaki as applied to claim 23 above, and further in view of Steinbiss et al. (US Patent 6,823,307), hereinafter referred to as Steinbiss.

In reference to claim 24, although Dietz and Kawasaki disclose substantial features of the aforementioned method such as storing the set of records in a history cache (column 17, lines 18-20), the references fail to explicitly disclose the method further comprising the step of: if the history cache is full, updating the statistical model includes removing a least recent event from the statistical model. Nonetheless, this would have been an obvious modification to the aforementioned method, to one of ordinary skill in the art at the time of the invention, as further evidenced by Steinbiss.

In an analogous art, Steinbiss discloses a method for employing stochastic models that involves storing recently recognized elements in a cache, (abstract; column 2, lines 25-38; and column 5, lines 15-30). Steinbiss further discloses once the cache is full, removing the least recently stored element, (column 5, line 60 to column 6, line 7). This modification would have been obvious, because one of ordinary skill in the art would have been so motivated to implement this feature so as to maximize available memory space, thereby reducing cost associated with larger capacity cache memories, (Steinbiss column 5, line 66 to column 6, line 3).

Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz and Kawasaki as applied to claim 23 above, and further in view of Aboulnaga et al. (US Patent 6,460,045), hereinafter referred to as Aboulnaga.

In reference to claim 27, although Dietz and Kawasaki disclose substantial features of

the claimed invention, the references fail to show generating a histogram statistical

model representative of the network data from the aggregation table. Nonetheless,

histogram statistical models were well known in the art at the time of the invention, as

further evidenced by Aboulnaga. Therefore, this limitation would have been an obvious

modification to the aforementioned method, as disclosed by the references, for one of

ordinary skill in the art.

In an analogous art, Aboulnaga discloses a method of building histogram

statistical models, (column 5, line 37 to column 6, line 3). Aboulnaga further shows

building a histogram that includes a first axis defined a number of bins (i.e. bins; Figure

6-*BUCKETS*), each bin having a variable range (i.e. high to low; Figure 3; column 6,

lines 30-55) and a second axis defined by a frequency (Figure 3&6) within the variable

range of each bin, (columns 5-10). This modification would have been obvious to one of

ordinary skill in the art, so as employ the bins and buckets of the aggregation table (I.e.

flow-entry table; Dietz; column 17, lines 9-35) to increase the accuracy of the statistical

model estimations and thereby increasing process effectiveness, (Aboulnaga column 1,

lines 54-55).

In reference to claim 28, Dietz discloses updating the statistical model includes updating

only a portion of the complex statistical model associated with an identifier (columns 17-

18).

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz and

Aboulnaga as applied to claim 29 above, and further in view of Steinbiss et al. (US

Patent 6,823,307), hereinafter referred to as Steinbiss.

In reference to claim 30, although Dietz and Aboulnaga disclose substantial

features of the aforementioned method such as storing the set of records in a history

cache (column 17, lines 18-20), the references fail to explicitly disclose the method

further comprising the step of: if the history cache is full, updating the statistical model

includes removing a least recent event from the statistical model. Nonetheless, this

would have been an obvious modification to the aforementioned method, to one of

ordinary skill in the art at the time of the invention, as further evidenced by Steinbiss.

In an analogous art, Steinbiss discloses a method for employing stochastic

models that involves storing recently recognized elements in a cache, (abstract; column

2, lines 25-38; and column 5, lines 15-30). Steinbiss further discloses once the cache is

full, removing the least recently stored element, (column 5, line 60 to column 6, line 7).

This modification would have been obvious, because one of ordinary skill in the art

would have been so motivated to implement this feature so as to maximize available

memory space, thereby reducing cost associated with larger capacity cache memories,

(Steinbiss column 5, line 66 to column 6, line 3).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LaShanya R Nash whose telephone number is (571)

272-3957. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Glenton Burgess can be reached on (571) 272-3949. The fax phone

number for the organization where this application or proceeding is assigned is (571)

273-8300.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

LaShanya Nash
Art Unit, 2153
March 20, 2006
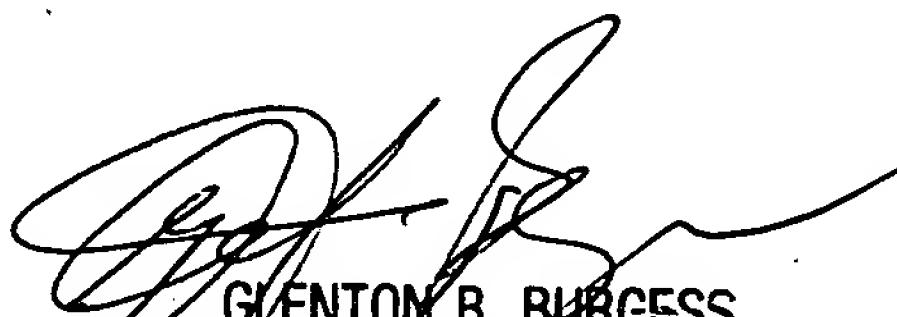
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